REMARKS

Reconsideration and allowance of the application and presently pending claims are respectfully requested.

1.Present Status of the Application

Upon the entry of the amendments in this response, claims 281-286 are pending in the present application. More specifically, claims 1-280 are canceled; claims 281-286 are newly added. It is believed that the foregoing additions add no new matter to the present application.

2.Response To Objections/Rejections

Applicants respectfully traverse the rejections for at least the reasons set forth below.

Response To Claim 281

The newly added claim 281 reads as:

281. A method for fabricating an electronic component, comprising:
joining a die and a substrate, wherein said die has a top surface at a horizontal level; and
after said joining said die and said substrate, depositing a bump over said horizontal level, wherein said bump comprises gold.

Applicants respectfully assert that the electric component claimed in claim 281 patentably distinguishes over the citations by Kim et al. (US6,004,867) and Eichelberger et al. (US6,396,148).

Kim et al. teaches that a method for fabricating an electronic component comprises joining a wafer 300 and a substrate 320, wherein the wafer 300 has a top surface at a horizontal level; and after joining the wafer 300 and the substrate 320, depositing a bump 330 over the horizontal level, wherein the bump 330 comprises gold. ~ *See FIGS. 5C-5E and lines 59-60, col. 6* ~ *Kim et al. teaches that the wafer 300 is joined with the substrate 320, but fails to teach, hint or suggest that a die, not a wafer, can be joined with the substrate 320, which is claimed in claim 281.*

Even Eichelberger et al. that a die 102 is joined with a substrate 101, but applicants do not consider that Kim's concept that a wafer is joined with a substrate can be combined with Eichelberger's concept that a die is joined with a substrate. Those skilled in the art should know that "die" is different from "wafer". A wafer is divided into multiple dies after cutting the wafer.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 281 patently define over the prior art references, and should be allowed.

Response To Claim 282

The newly added claim 282 reads as:

282. A method for fabricating an electronic component, comprising:
providing a die having a top surface at a horizontal level;
depositing an insulation layer over said horizontal level, wherein said insulation layer comprises a porous structure; and
depositing a metal layer over said horizontal level.

Applicants respectfully assert that the electric component claimed in claim 282 patentably distinguishes over the citations by Eichelberger et al. (US6,396,148).

Eichelberger et al. teaches that a method for fabricating an electronic component comprises providing a die 102 having a top surface at a horizontal level; depositing an insulation layer 106 over the horizontal level; and depositing a metal layer 109 over the horizontal level. ~ *See FIGS. 3A-3G and 4A-4F* ~ Eichelberger et al. teaches that the insulation layer 106 comprises polymer. ~ *See lines 19-22, col. 4* ~ However, Eichelberger et al. fails to teach, hint or suggest that the insulation layer 106 may comprises a porous structure, which is claimed in claim 282.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 282 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claim 282 patently define over the prior art as well.

Response To Claim 283

The newly added claim 283 reads as:

283. A method for fabricating an electronic component, comprising:
providing a die having a top surface at a horizontal level;
depositing a metal layer over said top surface and extending to a place not over said die; and
depositing a passive device over said horizontal level.

Applicants respectfully assert that the electric component claimed in claim 283 patentably distinguishes over the citations by Eichelberger et al. (US6,396,148).

Eichelberger et al. teaches that a method for fabricating an electronic component comprises providing a die 102 having a top surface at a horizontal level, and depositing a metal layer 109 over the top surface of the die 102 and extending to a place not over the die 102. ~ *See FIGS. 3A-3G and 4A-4F* ~ However, Eichelberger et al. fails to teach, hint or suggest that depositing a passive device over the horizontal level can be performed, which is claimed in claim 283.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 283 patently define over the prior art references, and should be allowed.

Response To Claim 284

The newly added claim 284 reads as:

284. A method for fabricating an electronic component, comprising:
providing a die having a top surface at a horizontal level; and
depositing a waveguide over said horizontal level.

Applicants respectfully assert that the electric component claimed in claim 284 patentably distinguishes over the citations by Eichelberger et al. (US6,396,148).

Eichelberger et al. teaches that a method for fabricating an electronic component comprises providing a die 102 having a top surface at a horizontal level. ~ *See FIGS. 3A-3G and 4A-4F* ~ However, Eichelberger et al. fails to teach, hint or suggest that depositing a waveguide over the horizontal level can be performed, which is claimed in claim 284.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 284 patently define over the prior art references, and should be allowed.

Response To Claim 285

The newly added claim 285 reads as:

285. A method for fabricating an electronic component, comprising:
providing a die having a top surface at a horizontal level; and
depositing a micro electronic mechanical sensor (MEMS) over said horizontal level.

Applicants respectfully assert that the electric component claimed in claim 285 patentably distinguishes over the citations by Eichelberger et al. (US6,396,148).

Eichelberger et al. teaches that a method for fabricating an electronic component comprises providing a die 102 having a top surface at a horizontal level. ~ *See FIGS. 3A-3G and 4A-4F* ~ However, Eichelberger et al. fails to teach, hint or suggest that depositing a micro electronic mechanical sensor (MEMS) over the horizontal level can be performed, which is claimed in claim 285.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 285 patently define over the prior art references, and should be allowed. For at least the same reasons, dependent claim 285 patently define over the prior art as well.

Response To Claim 286

The newly added claim 286 reads as:

286. A method for fabricating an electronic component, comprising:

providing a substrate comprising an organic material;
joining multiple dies with said substrate;
depositing a metal layer over said multiple dies, wherein said depositing said metal layer comprises electroplating; and
cutting said substrate.

Applicants respectfully assert that the electric component claimed in claim 286 patentably distinguishes over the citations by Eichelberger et al. (US6,396,148) and Marcinkiewicz (US6,025,995).

Eichelberger et al. teaches that a method for fabricating an electronic component comprises joining multiple dies 102 with a substrate 101; depositing a metal layer 109 over the dies 102; and cutting the substrate 101. ~ *See FIGS. 3A-3G and 4A-4F and lines 47-49, col. 8* ~ Eichelberger et al. teaches that the metal layer 109 is formed using an electroless process. ~ *lines 28-33, col. 8* ~ However, Eichelberger et al. fails to teach, hint or suggest that depositing the metal layer 109 may comprises electroplating, which is claimed in claim 286. Furthermore, Eichelberger et al. fails to teach, hint or suggest that the substrate 101 may comprise an organic material, which is claimed in claim 286.

Marcinkiewicz teaches that a substrate 14 may comprises metal, ceramic, plastic silicon or any III-V material. ~ See lines 58-61, col. 3 ~ Examiner asserted that these materials are considered as known materials for forming a substrate in semiconductor art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a known material, such as plastic (considered as an organic material), to form the substrate in Eichelberger et al.'s chip package, it has been held to be within the general skill of a worker in the art to select

a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *~ See lines 3-11, page 5 in the Office Action mailed May 10, 2005 ~* *Applicants consider that the Examiner's opinion is unreasonable, because Examiner appears to ignore the effect upon the process condition, thermal mismatch or thermal dissipation for an electronic component, caused by the material for the substrate. The materials, such as ceramic, metal or silicon, have different properties, such as hardness, coefficient of thermal expansion and so on, and we usually choose a better material for a substrate based on its properties to be suitable for different situations or objectives. Examiner ignores the effect upon cutting the substrate, caused by the material of the substrate. An organic material can be cut more quickly than other materials, such as ceramic, metal or silicon, so an organic material can be cut with relatively high cutting speed. Moreover, the cutter for cutting the substrate comprising an organic material is not easily worn when the cutter is a knife.*

Marcinkiewicz fails to teach, hint or suggest that the substrate comprising an organic material can be cut. Eichelberger et al. neither teaches nor suggests that the substrate to be cut may comprise an organic material. The feature that "the substrate comprising an organic material is beneficial for being cut" is not taught by Marcinkiewicz or Eichelberger et al. As a result, applicants consider that the feature of "cutting a substrate comprising an organic material" claimed in claim 286 is not taught by Eichelberger et al. and Marcinkiewicz.

For at least the foregoing reasons, applicants respectfully submit that the independent claim 286 patently define over the prior art references, and should be allowed.

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 281-286 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
J.C. Patents

Date: 8/10/2005

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